EARLY SMOKING PIPES OF THE NORTH AMERICAN ABORIGINES

by

ALFRED FRANKLIN BERLIN

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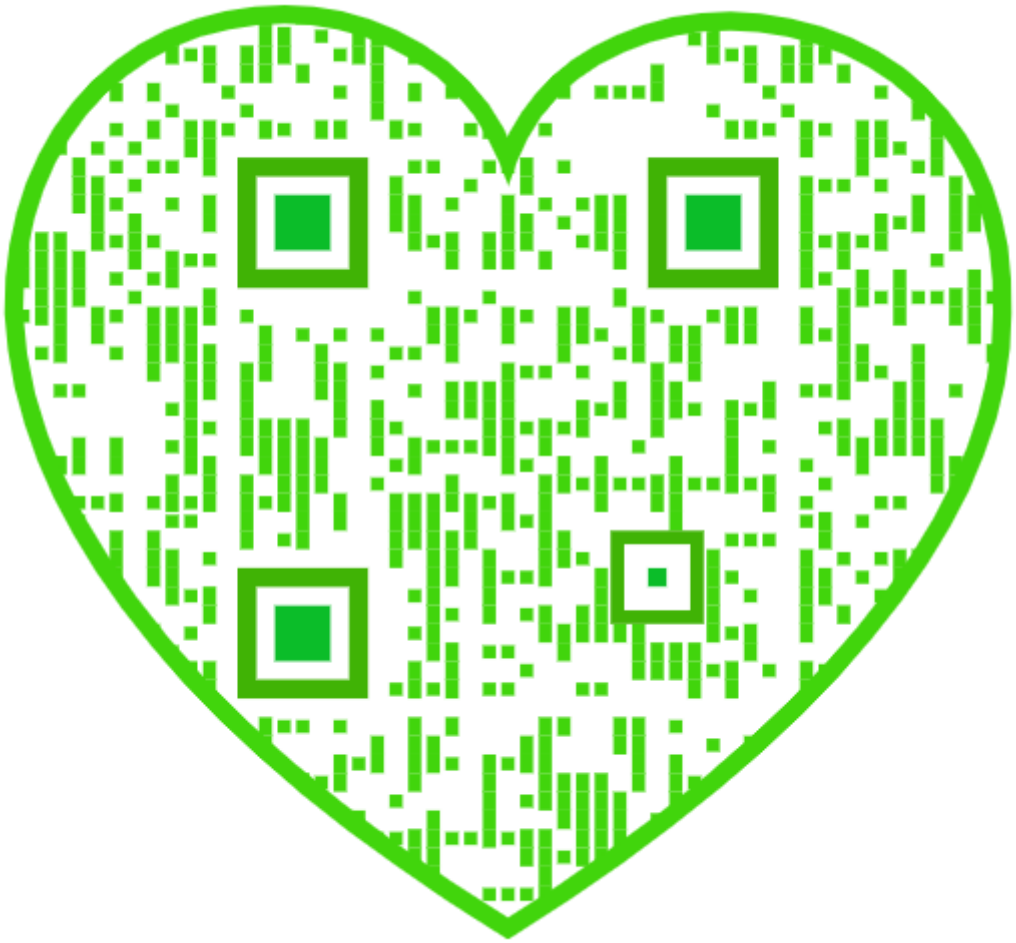

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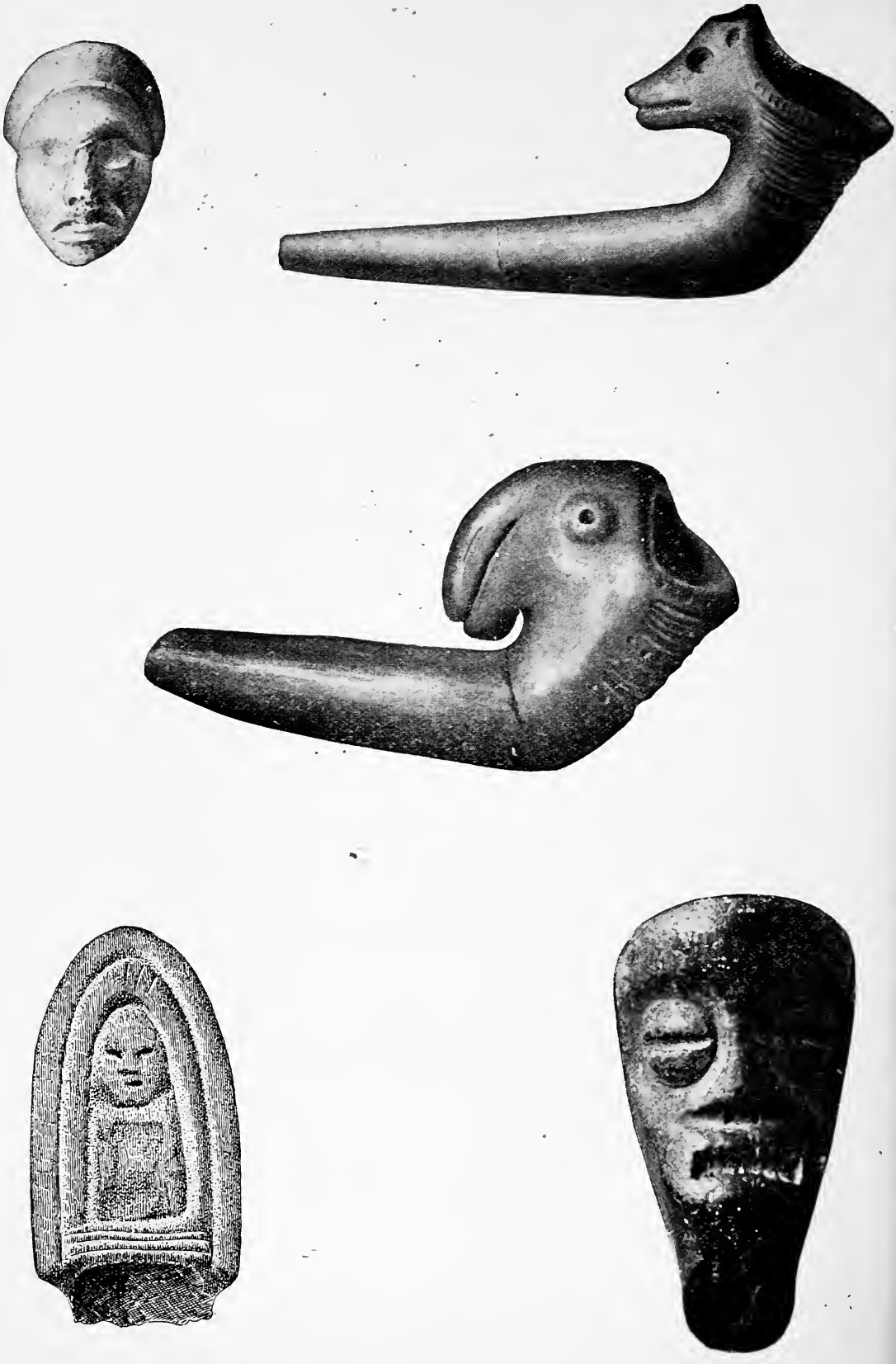

IROQUOIAN PIPES.

BY PERMISSION OF THE ETHNOLOGICAL BUREAU—20 ANNUAL REPORT.

EARLY SMOKING PIPES OF THE NORTH AMERICAN ABORIGINES.

BY

ALFRED FRANKLIN BERLIN.

READ BEFORE THE WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, APRIL 15, 1904.

The author wishes here to thank the following authors from whose writings he has often quoted. Professor William H. Holmes of the U. S. National Museum; the late Col. C. C. Jones of Augusta, Ga.; Dr. C. C. Abbott of Trenton, N. J.; Mr. David Boyle of Toronto, Canada; the Rev. W. M. Beauchamp of Baldwinsville, N. Y.; Gen. Gates P. Thruston of Nashville, Tenn., and the late Mr. Joseph D. McGuire of Ellicott City, Maryland.

As inveterate a smoker as his white successor to whom he taught the habit was the American Aborigine. The tobacco plant which he used most in the function of smoking, undoubtedly a long time before the advent of the European, was, we are told by reliable writers, indigenous to the North American Continent.

The first reference to the use of this plant, although not by name, was that reported to Columbus by two of his men while on his first voyage to the coast of Cuba. The Genoese mariner believed that he had landed on a part of the mainland of Asia. Assured of this he sent with two native guides two of his Spaniards, Rodrigo de Jerez of Agramonte, and a learned Jew named Luis de Torres, who could speak Chaldee, Hebrew and a little Arabic, one or other of which languages he thought must be known to the oriental potentate then ruling.

The ambassadors penetrated twelve leagues into the interior when they came to a village of fifty houses and about one thousand inhabitants. Finding no traces of the city

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and court they expected to see, they returned to their ships. On the way back they saw several of the natives going about with firebrands in their hands, and certain dried herbs which they rolled up in a leaf, and, lighting one end, put the other in their mouths and continued inhaling and puffing out the smoke. A roll of this kind they called a "Tobacos," which name, changed to tobacco, has since been transferred to the weed.

An almost endless variety of barks, twigs, leaves and the roots of plants having narcotic properties were smoked by the American red people. Red sumac leaves and willow bark were used to almost as great an extent as was tobacco. A mixture of either with tobacco was called Kinnikinnick. Others of the above mentioned herbs often mixed, were at times smoked in preference to tobacco as a prerequisite to the introduction of some ceremonial dance or function. However, when smoking for the purpose of becoming stupified or intoxicated they used only tobacco.

With our red people, even as at the present time, there was no habit so universal as that of smoking. The narcotic influences of this plant gave a certain amount of solace to the smoker when in his home of relaxation and rest. Nor was he without his favorite pastime even when away on the chase or at war. The Indian believed that tobacco was of Divine origin, coming as a direct gift for his especial benefit from the Great Spirit, who Himself was addicted to the habit of smoking.

"The pipe therefore came to be regarded as a sacred object, and smoking partook of the character of a moral if not of a religious act. The incense of tobacco was deemed pleasing to the Father of Life, and the ascending smoke was selected as the most suitable medium of communication with the world of spirits." Without the presence of the pipe, filled with lighted tobacco, was there no declaration of war, nor a treaty of peace made.

We are told by Col. C. C. Jones in his "Antiquities of the Southern Indians," page 384, that "Among the primitive inhabitants of at least some of the Southern regions pipes were elevated to the dignity of idols before whose elaborately carved forms of man and bird, and beast, the deluded fell down and worshipped."

Catlin savs. "There is no custom more uniformly in constant use among the poor Indians than that of smoking. Nor any other more highly valued. His pipe is his constant companion through life—his messenger of peace; he pledges his friends through its stem and its bowl, and when its care-drowning fumes ceases to flow, it takes a place with him in his solitary grave, with his tomahawk and war-club, companions to his long-fancied 'mild and beautiful hunting grounds.'"

A few more words in reference to the plant which gave so much exhilaration to our aboriginal people when using it will be interesting. It is known that they cultivated the plant. The question, however, arises, where was it first found in its wild state? Botanists declare that a very lengthy course of cultivation is required so to alter the form of a plant that it can no longer be identified with the wild species; and still more protracted must be the artificial propagation for it to lose its power of independent life, and to rely wholly on man to preserve it from extinction. Tobacco has been cultivated from an immemorial time by the Indians of America, and by no other race. It is no longer to be identified with any known wild species, and is certain to perish unless fostered by human care. What numberless ages does this suggest! How many centuries elapsed ere man thought of cultivating it! How many more passed away before it spread over the great extent of territory, nearly a hundred degrees of latitude, and lost all resemblance to its original form? Who can answer these questions? That the plant came originally from near the equator is proven

by the fact that it thrives best in hot regions. The Choctaw Indians, who once lived in the territory which is now the State of Mississippi, raised so much tobacco that at times they had a surplus to sell to traders.

The native northern tobacco, *nicotiana rustica,* is used in all sacred functions, and grows spontaneously when once introduced. It has a yellow flower, and is smaller that our commercial kinds. In the prosperous days of the Tionontatie, or Tobacco nation of Canada, it was a source of revenue to that ancient people. Loskiel tells us that "The species in common use with the Delawares and Iroquois is so strong that they never smoke it alone, but smoke it with the dried leaves of the sumac or other plants."

The Onandaga Indians of New York, still cultivate this species sparingly, calling it oyenkwa honne, real tobacco.

There is found no work of aboriginal art which so much commands the attention of the student of archaeology, and also of the general collector as do the smoking implements once used by the red American people, and which are unearthed from burial mounds, graves, earthworks and often picked up from the surface. Even more were they appreciated and held in esteem by those who used them. On them was exercised their highest taste and skill. For their construction the choicest material was selected. Often did the aborigine go far away from his home to procure the stone from which he made it; and in shaping and polishing it he spent days and often months. Experience taught him what sort of stone best withstood the action of almost continued heat, and as it was his almost constant companion one can well understand why, when possible, it was often so elaborately made.

To the Indian the smoking pipe possessed an importance which elevated it above the other implements made by them. No class of aboriginal art exhibits a greater diversity of form than do the pipes carved from stone or moulded in

clay. A volume would indeed be required for figuring and describing these utensils upon which so much work and time was spent. Limestone, slate, sandstone, soapstone, talc, syenite, catlinite and other varieties of stones were used in the making of them. Soapstone or talc, in its various colors found in almost every state in our Union, was the material generally used. As compact soapstone is not easily fractured and not injured by heat it was very suitable for the purpose. It can be worked without great labor, and some varieties can be given a surface nearly as brilliant as marble. The material from which they were made was often carried great distances. Pipes were exchanged for other commodities. We are told by Lawson that the Southern Indians manufactured pipes of clay to send to far away regions in exchange for skins and other merchandise. This practice prevailed throughout North America before the advent of the Europeans, and the fact that such a trade was carried on is proved, beyond any doubt, by the frequent occurrence of Indian artifacts, consisting of materials which were evidently obtained from distant localities. In many cases, however, these articles of manufacture may have been brought as booty, and not by trade, to the places where they are found in our days. It is well known that the modern Indians sometimes undertook expeditions of a thousand or twelve hundred miles in order to attack their enemies. The warlike Iroquois, for example, who inhabited the present State of New York, frequently followed the war-path as far as the Mississippi River. Thus, in the year 1680. six hundred warriors of the Seneca tribe invaded the territory of the Illinois, and more than a hundred years ago the traveler, Carver, learned from the Winnebagoes, who lived in the present State of Wisconsin, that they sometimes made war excursions to the southwestern parts inhabited by the Spaniards (New Mexico), and that it required months to arrive there.

The learned Jesuit Lafiteau, has given some account of Indian trade as it was in the beginning of the eighteenth century. He says, "The savage nations always trade among each other. Their commerce is, like that of the ancients, a simple exchange of wares against wares. They all have something particular which the others have not and the traffic makes these things circulate among them." Loskiel, who chiefly treats in his work of the Delaware and Iroquois refers to aboriginal trade. In describing the pipes of those Indians he says: "Some are manufactured from a kind of red stone, catlinite, which is sometimes brought for sale by Indians who live on the western side of the Mississippi, which they extracted from a mountain." This implies a direct trade connection of between twelve or thirteen hundred miles. Loskiel, however, never visited America. He writes about what other observers described to him.

Catlinite, a soft indurated clay, also called Red Pipestone, played an important part in the manufacture of the Indian's pipe. This material was named after George Catlin, a native of Wilkes-Barré, who first discovered its origin, and who lived many years among the Indians. Though the material was known for a long time the exact location of the quarries where it was mined has been known only about fifty years. It is situated near the town of Pipestone, in southwestern Minnesota. The color of Catlinite varies from dark red to light pink. Specimens of mottled pink and white can also be seen. It is slightly harder than soap-stone, is easily cut with a steel knife or scraped by means of sharp edged-tools of stone or shell.

Pipes of this material have been found over a wide area, even as far as twelve hundred miles from the quarry eastward, in graves and on the surface, and are of many and various forms. The Sioux Indians made many Catlinite pipes. They took a piece of the rock from the best portion of the vein, which is scarcely two inches thick, and the

Indian sculptor, with an old piece of hoop iron, or a broken knife blade, fashions the block roughly into the desired form. Then slowly with the same tools, he bores out the bowl and the hole in the stem before carving the exterior, so that if in the process of boring the stem should be split no labor would be lost. After this is accomplished he shapes the surface into any design which he may have in view. This work often occupies weeks before it is completed, after which the carving is polished by rubbing it with grease or oils in the palms of the hands.

Catlin tells us that the Indians shape out the bowls with nothing but a knife, and the hole in the bowl of the pipe by drilling into it a hard stick, shaped to the desired size, with a quantity of sharp sand and water kept constantly in the hole which requires great labor and much patience.

It may interest my readers to know that between the years 1865 and 1868, the Northwest Fur Company made nearly two thousand pipes and traded them to the Indians on the Upper Missouri. Many of these pipes no doubt may now be seen in collections and shown as true Indian artifacts. A knowledge of this will, in the future, certainly throw a suspicion on pipes coming from that region.

The almost endless variety of material from which pipes were made is shown in the case of the Micmac Indians of Nova Scotia, who sometimes used tobacco pipes made of birch bark, rolled in the form of a cone. These of course are perishable.

Prince Maximilian of Wied, in his "Travels in the Interior of North America," London, 1843, refers to some of the Indians of Indiana, who smoked sumac leaves in wooden pipes.

Mr. McGuire, the archæologist, says: "It has been commonly supposed that to make a stone pipe required weeks if not months of patient labor." I have, however, demonstrated that with primitive tools, picking, grinding and drill-

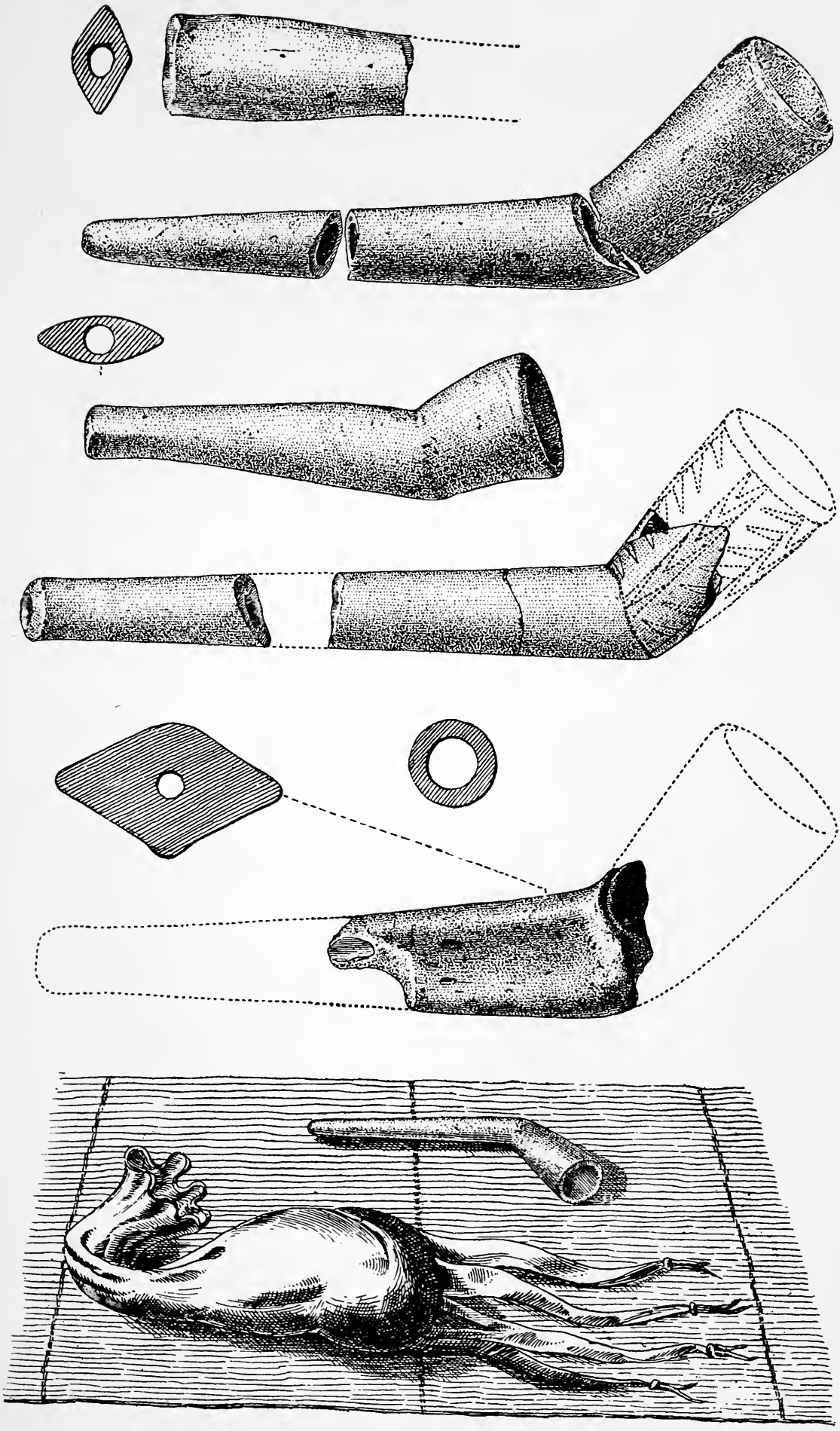
ing, almost any pipe, such as those which have been used by American Indians, could be completed in less than three days' work, and the more ordinary ones in a few hours.

The Esquimo pipe in type appears to have derived its form from the Japanese pipe, and to have been introduced from Japan. From these people the Esquimo may have learned the smoking habit.

Pipes were sometimes made of deer-horn, bone, walrus-ivory and wood. Specimens of these may be seen in the different museums in our large cities.

"The pipe of the Indians of New Sweden, otherwise Pennsylvania," says Holm, "appears to have had a stem equal in length to any on the Continent. They make tobacco pipes out of reeds about a man's length; the bowl is made of horn, and to contain a great quantity of tobacco; they generally present these pipes to their good friends when they come to visit them at their houses and wish them to stay sometime longer; then the friend cannot go away without having a smoke out of the pipe. They make them of red, yellow and blue clay, of which there is great quantity in the country; also of white, gray, green, brown and black and blue stone, which are so soft that they can be cut with a knife. The length of this pipe and the stem seems somewhat out of proportion when compared with other pipes known to us." The traveler Catlin represents a Chippewa Indian standing erect leaning on a pipe stem. Our knowledge of the handicraft of the American aboriginal people is very limited, owing to the very few records preserved by those who first came among them.

John Lawson, the historian, who knew of the terrible conditions existing in America about 1700, between the tribes on account of the avaricious commercial rivalry of the French, Spanish and English, which caused many bloody encounters, says in his "History of North Carolina:" ""Tis a great misfortune that most of our travelers, who go to this



POTOMAC VALLEY TOBACCO PIPES.

BY PERMISSION OF THE ETHNOLOGICAL BUREAU.—20TH ANNUAL REPORT.

vast Continent in America, are persons of the meaner sort, and generally, of a very slender education; who being hired by the merchants to trade amongst the Indians, in which voyages they often spend several years, are yet, at their return, incapable of giving any reasonable account of what they met withal in those remote parts; though the country abounds with curiosities worthy of a nice observation."

Of the manner of drilling the long stemmed stone pipes, a few of which have been found on the Atlantic Coast, he says: "These they roll continually on their thighs with their right hand, holding the bit of shell with their left, so in time they drill a hole quite through it which is very tedious work; but especially in making their Ronoak, four of which will scarce make one length of wampum, the work was performed with a nail stuck in a cane or reed." The women of the North Carolina Indians, when they find a vein of white clay fit for their purpose, make at spare hours tobacco pipes, which are transported to other Indians that perhaps have greater plenty of deer and game."

Lawson further says: "The women smoke tobacco; they have pipes whose heads are cut out of stone, and will hold an ounce of tobacco, and some much less."

SCARCITY OF PIPES ON THE ATLANTIC COAST.

The scarcity of pipes of every kind of material on the Atlantic coast, is much commented on by writers interested in the science of archæology. From the Florida shell mounds but few have been taken. On the shores of Chesapeake Bay, in Maryland and Virginia, where thousands of acres of ground are covered with shell deposits left by the Indians, but few of these smoking implements have been found. The burial customs of those who formed these deposits are at present not very well understood. It is possible, however, that a careful examination of graves when found may clear up this mystery.

Dr. C. C. Abbott, the archæological writer, comments on this rarity in this manner: "The comparative rarity of aboriginal smoking pipes is easily explained by the fact that they were not discarded as were weapons, when those by whom they were fashioned entered upon the iron age. The advances of the whites in no way lessened the demands for pipes, nor did the whites substitute a better made implement; therefore the pipes were retained and used until worn out or broken, excepting such as were buried with their deceased owners. If this practice was common we must believe that the graves were opened and robbed of this coveted article by members of the same or some other tribe. This may be objected to on account of recognition by friends of the owner of the stolen property, but we do not think the fear of detection deterred the ancient grave robber."

On account of this scarcity it is believed by others that while smoking was probably indulged in, it was but to a limited extent until the whites, by the cultivation of tobacco, popularized its use.

Although he stopped at many places Verazzano, in his voyage in 1524 along the Atlantic coast, from the thirty-fourth degree of latitude to Newfoundland, mentions neither tobacco nor the pipe as being used by the natives.

TUBULAR PIPES.

First to be noted is the tubular or funnel-shaped and hour glass form of pipe, which consists of the stem and bowl in the same plane. It may also be likened to our present cigar holders. These smoking implements measure in length from one and one-quarter inches to almost a foot. They were made from clay, stone, bone, copper and wood, and wood and stone in combination. It is believed that this was the primitive form of pipe. The most ancient and most reliable evidence of the use of this pipe in America is to be seen on the bas-relief of the Alta Casa or Adoratio at the entrance

of the Temple of the Cross, which is a prominent feature of the ancient, holy and mysterious city of Palenque in Yucatan, Mexico. This slab or altar, which is six feet long, and about three feet wide, is of artistic design and finish. It represents an old man in an upright position, dressed in the skin of a tiger, with a serpent coiled around his waist, whose tail curls up behind and coils in front. In the palm of both hands he holds a tubular, ornamented object through which he appears to be blowing something visible, which ascends and descends as it leaves the mouth of the tube.

The Moki Indian priest of New Mexico, to-day holds his pipe, which has the exact shape as that shown on the slab, in a similar manner, assumes the same posture, and through it at the ceremonial, blows the smoke to the four winds, North, East, South and West, as well as to the upper and lower world.

In the Manuscript Troano, Plate XXVI., is shown another smoking function with the tubular pipe. The individual in this case is in a sitting posture. Prof. Cyrus Thomas, who made an exhaustive study of this manuscript, calls the conical tube in the mouth of the figure a cigar. It is represented at the larger end nearest to the opening with a narrow black ring, and back of it a broader ring. Cigars would hardly be ornamented in this manner unless perhaps for use in a particular ceremony.

Sixteen of these nicely wrought implements of steatite or soapstone, the largest more than nine inches long, and others seven and eight inches in length, were taken a number of years ago from graves at Dos Pueblos and La Patera, California, on the coast of which state they appear somewhat plentiful. A number of them still contain the mouth-pieces made from the small hollow bone, either from the leg or wing of a bird, which were secured into the smaller end of the tube with asphaltum.

The holes in these interesting objects were drilled from

both ends, but only to a short distance from the smaller. Concentric circles in the perforations indicate that the tool with which the boring was done was of a flinty nature. The sharp point and edges of arrowheads may have served well for this purpose.

PIPES WITHOUT STEMS.

These are of great variety, varying from a simple cube to a most complex animal form, and next to that of the tubular pipe, are most widely distributed. They consist merely of a bowl, the hole for the insertion of the stem being driven into one of the walls of the bowl. The stems for insertion were made of reed, bone or wood, held in position by leather straps bound around bowl and stone while damp or wet, and which while drying contracted, holding both together as though made from a single piece. McGuire seems to think them an evolution of the tubular pipe, and accounts for this theory as follows, in his "Pipes and Smoking Customs of the American Indians." "There are many ways of accounting for the evolution of the tubular pipe into one of rectangular shape. The smoking of the tube would undoubtedly be extremely awkward and notwithstanding the pebble or pellet of pottery dropped into the bowl, the material smoked would escape from the smoker's mouth while being held perpendicularly as though drinking, while an accidental or intentional curve would suggest a valuable improvement in shape."

The bowl is about thrice the size of the perforation for the stem, which was drilled by means of a solid drill-point of stone or wood, with the aid of dry sand. These pipes at times are inlaid with metal or shell. This form of pipe is found in territory adjoining lakes Ontario and Erie, down through Ohio, Indiana and Kentucky, into Tennessee and North Carolina, and along the Atlantic coast up to British America. It is supposed that the territory through which they are found, and also their often graceful shape indicate French influence.

DOUBLE CONOIDAL PIPES.

This distinct type of pipe invites a most careful examination. They are found in Michigan, Ohio, Virginia, Kentucky, Tennessee, Missouri, South Carolina, Georgia, Alabama, Mississippi, Louisiana, and Arkansas. The characteristics which allow these pipes to be given the above title, are, that the bowl and stem holes consist of cone-shaped excavations perforated at right angles to each other, meeting at their apices where both cavities connect. This pipe varies in its exterior from probably more than any other American type known. Often the funnel-shaped perforations are so near alike that one is at a loss to know which one served for the bowl. We are told that of the whole number of pipes in the United States National Museum, there is not a single specimen which has upon it a mark indicative of the use of other than the stone tools of the primitive Indian, though many of them are of quite elaborate design, and show excellent treatment. They are made of pottery, hardened clay, steatite and sandstone. Material was at times used most unsuitable to resist heat.

The double conoidal pipes commonly found along the Lower Mississippi and in the southern United States generally have large bowls and stems bored at right angles one to the other, the openings of which are an inch or more in diameter. They are almost always of stone, and are bored by means of a solid drill, though pottery specimens occur. They vary greatly in exterior shape, all the way from the plain cube to the most elaborate animal form.

In his "Antiquities of Tennessee," General Thurston calls attention to this form if pipe, saying: "Large funnel shaped stem holes, sometimes even larger than the pipe bowls, appear to the author to have been one of the distinguishing characteristics of the Southern clay and stone pipes, and we suggest to antiquarians the importance of this feature in the proper classification of these objects."

MOUND PIPES.

Squire and Davis, while surveying the ancient earthworks in Ohio, found this particular type of pipe in considerable numbers. From one of the hearths of a number of mounds situated four miles north of Chillicothe, Ohio, these explorers took nearly two hundred stone pipes of this peculiar form, many of which were damaged by the action of fire. They are now contained in the Blackmore Museum, Salisbury, near London, England. They constitute the finest exhibit of American aboriginal pipes in the world, and it would require the combined collections of the three largest American museums to surpass them. Soft material, such as compact slate, argillaceous ironstone, ferruginous chloride and calcareous minerals was generally used in making them. They vary greatly in their finish. They are from two to five inches long, one to two inches high, and one and one-quarter to one and one-half inches broad. Some of the pipes of animal form found near Chillicothe, appear to have had artificial eyes, most of which were destroyed by fire. A pearl, however, which formed the eye of one still remains.

The bowls of these fine pipes were perforated by means of tubular metal drill points, and the small stem or base holes by solid points. Some archæological experts wish us to believe that these pipes owe their origin to early French influence, and, therefore, are not of great age. Pipes of this kind made from Catlinite have been found, and all archæologists agree that this material came into use about the time of the arrival of the Europeans. A close examination of many of them shows tool marks which suggests the metal file or rasp, a tool of the whites. The style also of the carving is more of a civilized than of a savage character, and does not correspond with the known products of the tools of the primitive Indian.

These pipes are found in Michigan, Wisconsin, Iowa, Illinois, Indiana, Ohio, West Virginia and Virginia. Much

of this territory was covered by the French in aboriginal times.

These pipes have been given this name because the greater number of them have been taken from mounds and earthworks which are so plentifully distributed in the valleys of the Mississippi and Ohio. These elevations and works of defence are found almost invariably along the lines of the great rivers of the interior, due presumably to the fact that these rivers were the lines of least resistance to the free communication from one point to the other, and consequently were the trade routes of the interior whether of Indian or white men. The base of these pipes is broad and curved. The upper side usually presents a convex surface from side to side. Sometimes this side is perfectly flat and very rarely it is found having a concave surface. The stem-holes are extremely small, usually measuring one-sixteenth of an inch in diameter, and perfectly straight, and there seems to be no doubt that the part of the base through which was drilled the perforation to the bowl formed the mouthpiece. The bowl rises from the center of its base, often plain and round, which is supposed to be its primitive form. The carved specimens are very often elaborately wrought from a great variety of stones, and represent the human head, snakes, frogs, turtles, lizards, raccoons, otters, beavers, bears, panthers, eagles and other birds. Others there are representing animals which cannot be identified.

MONITOR OR PLATFORM PIPES.

This generally plain but highly polished type differs somewhat from the mound form. It has an almost straight base, and is generally triangular in section. The round bowl in almost all cases rises from the center of its base. No other Indian pipe is so striking in its characteristics. The name "Monitor" was given it because of its similarity to that strange form of naval fighting machine which created so great a sensation in Southern waters during the Civil War.

It is widely distributed in the eastern part of the United States and is often found in mounds and other primitive burial places. In its finish and its outline no American aboriginal pipe surpasses it. Upon it appear no representations of animal life as upon the mound pipes, and rarely ornamentations of any sort. They were made from steatite or soapstone, rarely of serpentine, but at times of clay. They vary in color from white to black. The walls of their bowls are remarkably thin, and more care was expended in polishing and drilling them than upon any other form of pipe. They vary in length from three to eighteen inches. Their bases are one to four inches wide. The bowls are deep from one to eight inches, with a diameter of from three-quarters of an inch to one and three-quarters, usually cylindrical, though at times distinctly elliptical. They appear to have had no extra mouth-piece. The stem-holes seldom exceed one-eighth inch in diameter, and are accurately bored; the variation of the size of the stem-hole from end to end being scarcely appreciable. Mr. Joseph D. McGuire appears to think that: "This remarkable accuracy of boring in stone where the walls of the tubes and bowls are commonly not in excess of one-eighth of an inch thick is almost proof positive that the drilling was done with steel tools." The belief is gaining ground that many of the fine aboriginal pipes found in North America were made immediately after the advent of the whites with steel tools. There are many indications on them to show that the white man's file and rasp were factors in their production. Major J. W. Powell, the late director of the Bureau of Ethnology at Washington, D. C., several years ago in the magazine "Forum," Vol. 8, pp. 492-93, brought forth the ingenious idea that the white men who first came to this country, made with civilized appliances, many of the fine relics, such as pipes, axes, ceremonials, etc. An examination of many fine objects, made from the hardest kind of stone, almost compels one to conclude that this theory may in some instances be a correct one.

INDIAN PIPES IN THE COLLECTION OF THE WYOMING HISTORICAL AND GEOLOGICAL SOCIETY.

1. Serpentine, 5¾ in., Santa Barbara, Cal. 2 and 4. Steatite, 6 in., Crawford, Miss. (Berlin). 3. Clay, 4¼ in., Wyoming Valley. 5 and 6. 2½ in., Delaware Indians, South Street, Wilkes-Barre. 7. Serpentine, 3½ in., Wyoming Valley.

John Smith in Virginia, in 1608, asked permission of the Indian Chief Powhatan to go through his territory to obtain stone for making axes, and one is forced to believe that the trade and manufacture of stone implements has been greater than is generally supposed.

These pipes are found in Missouri, Kentucky, North Carolina, South Carolina, Tennessee, Ohio, Michigan, West Virginia, Virginia, Maryland, Pennsylvania, New York, Rhode Island, Massachusetts, New Hampshire, Vermont, Connecticut and Nova Scotia.

ELEPHANT PIPES.

Two notorious pipes, which it is claimed represent well the mammoth or elephant, are owned and displayed in the museum of the Academy of Science at Davenport, Iowa. They represent the elephantine-shaped animal standing one on a straight base, the other on a platform slightly curved. The bowl is cut down from the back of the head into the front legs, and the mouth-piece in both cases, that part of the base facing the trunk or head of the animal. They were brought to light by a German Lutheran minister named Gass in Iowa, who claims to have found them not very far from where he lived. This gentlemen also claims to have discovered curious stone tablets upon which are engraved figures suggesting in a rude manner the mastodon. Although ably defended by members of the Davenport Academy of Science, the authenticity of these pipes has been questioned by experienced archæologists. That doubt was felt in the minds of some as to the genuineness of his alleged discoveries was due to the fact that he had previously been detected in exchanging spurious archæological objects of his own make with another collector in return for genuine and true relics.

GREAT PIPES OR CALUMETS.

John Smith, as early as 1608, writes of pipes of sufficient weight and size to beat out a man's brains. They are usually

carved in imitation of the human figure, of birds or animals, and other forms, and are the largest and heaviest of all American smoking implements.

Dr. Joseph Jones, in his "Antiquities of Tennessee," tells his readers that he has seen some of these aboriginal pipes, made of hard green-stone and highly polished, which were over eighteen inches long.

In his description of the New England Indians in 1643, Roger Williams says: "Sometimes they make such great pipes, both of wood and stone, that they are two feet long, carved with men and beasts, and so big that a man may be hurt mortally by one of them. They commonly come from the Mauguawogs, or the men eaters three or four hundred miles from us." He means the Mohawks, a tribe of the Iroquois nation.

The Rev. C. C. Pyrlaeus, a pupil of Conrad Weiser, of whom he learned the Mohawk language, and who was afterward stationed on the Mohawk River as a missionary, has in a manuscript book, written between the years 1742 and 1748, page 225, the following note which he received from a principal chief of that nation. "The Five Nations formerly did eat human flesh. They at one time ate up a whole body of the French King's soldiers. Aged French Canadians told the Moravian missionary Heckewelder, while he was at Detroit, that they had frequently seen the Iniquois eat the flesh of those who had been slain in battle, and that this was the case in the war between the French and English in 1756."

"Made with astonishing skill these great pipes are supposed to be of doubtful antiquity. Used as pipes of peace and for other ceremonies, they are objects of tribal veneration which lends special interest to their history.

"Steatite, or soapstone, seems to have been the most common material used in making them. Catlinite, chlorite, sandstone and serpentine were materials sometimes also used.

"The stem holes in this form of pipes are in a majority of

cases so placed that the bird or beast faces from the one smoking it. They are nicely finished, the tool marks on the outside usually entirely obliterated, though the drill marks and evidences of enlargement of the bowls and stems are often plainly seen. Some of them are pre-historic and of great age. Others no doubt were made while the whites were already occupying this country. The early discoverers report that most of the tribes of historic Indians made and used them. Father Hennepin tells us that the Calumet is the most mysterious thing in the world among the North American Indians. That it is used in all their important transactions, and that it is a pass and safe conduct amongst all the allies of the nation which has given it. In all embassies the ambassador carries the calmut as the symbol of peace, which is always respected; for should it not be, misfortune would befall those who violated the public faith of the calmut. All their ceremonies, be they a declaration of war or a conclusion of peace, as well as any other enterprise, were sealed with it. They fill it with their best tobacco and then present it to those with whom they have concluded any great affair, and smoke out of it after them. This early voyager would certainly have perished had he been without a pipe of this kind. With the calumet in one's possession, and showing it when ordered so to do, one could march fearlessly amid enemies who, even in the heat of battle, laid down their arms when it was produced."

We are informed by Loskiel that if two Indian nations entered into a treaty of alliance, a pipe of peace was exchanged between them, which was then called the Pipe of Covenant. It was carefully preserved and generally lighted in council whenever anything occurred appertaining to the alliance. Then each member smoked a little out of it. This reminded them in the most impressive manner of the covenant and the time of its establishment.

When M. D'Iberville sought his first interview with the

Florida Indians, he was received by their chiefs smoking the calumet and singing the song of peace. The pipe used on this occasion is thus described: "The Calumet is a stick about a yard long, or a hollow cane, ornamented with the feathers of the paroquet, birds of prey, and of the eagle. These feathers, arranged around the stick, resemble somewhat the fans used by French ladies. At the end of this stick is a pipe, to the whole of which the name of Calumet is given."

Father Charlevoix says: "The Calumet, if you believe the Indians, is derived from heaven, for they say it is a present which was given them by the Sun. There is scarce any room to doubt but that the savages in making those smoke the calumet with whom they would trade or treat intended to take the Sun for withness and in some measure for a guarantee of their treaties; for they never fail to blow the smoke toward that luminary."

Calmut is a Norman word signifying a reed, and the calumet of the savages is properly the tube of the pipe.

Robert Beverly, in 1722, enumerates five things which were always observed in receiving strangers, in order to determine whether they came on a peaceful or on a warlike mission.

First. They take a pipe much larger and bigger than the common tobacco pipe, made expressly for the purpose, with which all towns are provided.

Second. This pipe they always fill before the face of the strangers, and light it.

Third. The chief man of the Indians takes two or three whiffs and hands it to the chief of the strangers.

Fourth. If the stranger refuses it, it is a sign of war.

Fifth. If it be peace, the stranger takes a whiff or two and hands it to the next great man of the town they come to visit; he, after taking two or three whiffs, gives it back to the next of the strangers, and so on alternately until they

have passed it to all persons of note on each side, and then the ceremony ended.

The sanctity of the calmut of peace was not at all times recognized by the Indians. Charles the Canadian, in January, 1703, had his arm broke by a party of Indians who had presented the calumet, and the same night assassinated his companions. There are cited other instances where the sanctity of the peace pipe was not always respected, and of a refusal to even communicate with those carrying it.

Lafiteau writes that if in council between ambassadors and the Indians concerning the making of peace the council decides upon war, it is a great misfortune for the ambassadors, for the law in that case only protects them as long as the matter is in abeyance, but being negatived they knock them in the head where they are, though they often take honorable leave of them and then send and have them assassinated a few days' march from the village.

A general examination of authors who have written on the pipe of peace warrants the conclusion that this habit obtained from southern Florida to the country of the Iroquois, throughout the valley of the Mississippi and as far west as New Mexico, which indicates for it a great antiquity.

CLAY OR TERRA COTTA PIPES.

Smoking implements of this material from the size of a thimble to those having a capacity of one and even two ounces, and of various and diversified designs have been found in every section. In a perfect condition they are however, not numerous. Fragile ware of this kind would certainly not last very long unless carefully handled.

In the manufacture of these pipes a mixture of sand, clay and broken or pounded shells was used. The pipe of this material was no doubt mostly used by the aborigine for his personal use in smoking. The human form was copied, often in a grotesque and obscene manner, and Col. C. C.

Jones, in his "Antiquities of the Southern Indians," on page 412, writes: "The nude human figure in kneeling, bending or sitting posture, frequently forms the subject of imitation, and we have seen several pipes of this description which, in the language of Adair, "could not much be commended for their modesty.'"

Quadrupeds, birds and reptiles, too, were imitated, and some remarkable specimens have been found, which proves that the Indian molded as artistically in clay, as he sculptured in other and harder material.

Kalm, who traveled in America and who was in New Sweden, now Pennsylvania, in 1749, at a place on the Delaware River below Philadelphia, called Raccoon, says: "The natives had tobacco pipes of clay, manufactured by themselves, at the time the Swedes arrived here." Some of the purest clay pipes found are from the Lower Mississippi.

The Virginian Indians, according to Strachey, made their tobacco pipes of a clay more fine and smooth than he had seen anywhere else. The Maryland aborigines, and those of the coast countries north and south of Maryland possessed a fine clay from which were made pipes of a bright red color.

BIRD AND ANIMAL PIPES.

Pipes of this type are not plentiful, but curious and of a pronounced type. They represent of the birds, the owl, eagle, raven and other feathered forms. In all cases so far as the writer knows the bird is represented sitting upon a perch or limb. This form of pipe without any objection may be classed with those smoking utensils representing the human form, the bear, panther and wolf. Of the bird form this state seems to have furnished a number of them. It has been suggested that they were made with metallic tools at about the time of the arrival of the white man. While the bowl in most specimens is placed at the back there are found others which have the bowl in front. It is supposed

that they originated in territory occupied by Iroquois Indians, and are probably the result of individual design, and have not any particular relationship to totems. Pipes of this form are sometimes distinguished as a "jumping-jack" variety.

McQuire seems to think that the small perforations for suspension which is seen upon many of them indicates their origin in a country where deep snows occur.

MICMAC PIPES.

In archæological cabinets may be seen primitive looking, curiously formed types of pipes which are still smoked by aboriginal people in the northern part of this Continent. They are called the Micmac or Bottle Stopper Pipe. It has a bowl, in shape similar to an inverted acorn, which rests upon a keel-like base, broadest where it touches the bowl, and extending beyond the bowl at times an inch or more on each side. Through the top of this base or keel there is drilled a stem-hole one-half its length until it intersects at right angles with the base of the bowl. The tops of these terraced bases are seldom more than half an inch wide, though from front to back they are often three inches or more long, and from top to bottom they are as deep as long. The sides of the bases are parallel to each other and are in two or three terraces, decreasing often until the lower part of the base is scarcely more than one-eighth of an inch thick. Through this base there are almost invariably one or more perforations.

This type is found from the Atlantic to the Pacific Ocean, through the territories over which roam aborigines of Athabascan, Iroquoian and Algonkin linguistic stocks. Its high polish and display of file marks suggests the presence of the European. The high polish of implements is almost unknown through the center of the American Continent, until the possession by the Indian of the tools of the whites. The

type is undoubtedly an old one, and some of the specimens bear evidence of being made with primitive tools.

The territory through which they are distributed is that of the Hudson Bay Fur Trading Company, and very likely is of a type sold to the Indians by them.

Dr. Beauchamp, in his Bulletins of the New York State Museum, shows several of these pipes and claims they are recent forms.

One of the smallest pipes of this kind known is to be seen in the Archæological Museum at Toranto, Canada. Its whole length is one and one-quarter inches. Its greatest width at bowl is five-eighths of an inch.

CHEROKEE PIPES.

Col. C. C. Jones, in his "Antiquities of the Southern Indians," page 400, says: "It has been more than hinted by at least one person whose statement is entitled to every belief, that among the Cherokees dwelling in the mountains of the Southern States, there existed certain artists whose professional occupation was the manufacture of stone pipes, which were by them transported to the coast, and there bartered away for articles of use and ornament foreign to and highly esteemed among members of their own tribes."

These pipes differ in certain respects from those found in other parts, and may be called a distinct type. They are usually nicely polished, quite symmetrical, and are for a certainty the most modern or aboriginal smoking implements. The round bowl often has a slight lip in front, and the stem is usually square, the animal on it being either a turtle, squirrel, bear, raccoon or bird, always facing the smoker. Seppentine and chlorite were used in making them. Whether a totemic significance was attached to them remains to be discovered.

The Cherokee Indians of the Southern States also used wooden pipes, carved in the form of bears, the bowl being in the back and the tube orifice near the tail.

8. Serpentine, 3¾ in., Wilkes-Barre. 9. Banded Slate, 3 in., Pequa, Ohio. (Berlin). 10. Steatite, 2¾ in., Wyoming Valley. 11. Stone, 3 in., Tunkhannock, Pa. 12. 5 in. 13. 3¼ in., Wyoming Valley (Wren). 14 and 15. 2¾ in., Wyoming Valley.

A number of years ago were living in North Carolina several full-blooded Cherokee Indians, who carved with a steel blade artistic animal pipes. The name of the principal maker was Chic-a-le-lah. They weigh but a few ounces, and grace every collection containing them.

IDOL PIPES.

Of great interest are the very rare pipes representing the human form in a sitting position. They are called Idol Pipes.

Of this remarkable type of smoking implement, Col. C. C. Jones, in his "Antiquities of the Southern Indians," page 401, makes the following interesting statement: "First in interest and in art is the Idol Pipe. This is rarely seen, and only in localities where, in the distant parts, dwelt people to all appearances more permanent in their seats and tribal organizations; more argicultural in their pursuits; more addicted to the construction of large tumuli; and superior in their degree of semi-civilization to the nomads who occupied the soil at the date of European civilization. Specimens of such pipes are as infrequent as stone images, and it is probable that they should both be referred, in their origin, to the handiwork and superstition of the primitive men who threw up those large mounds which tower along the banks of the Etowah, and lift their imposing forms from out the level of several other valleys in Georgia. They are always associated, so far as our knowledge extends, with the large pentagonal and quadrangular mounds, and with those older monuments—be they watch towers, sepulchral tumuli, temples, consecrated spaces, enclosed areas, defensive works or playgrounds—of whose age and objects the latter Indian tribes cherished not even a tradition." These pipes are obviously very old, and in all likelihood antedated, by an indefinite period of time, the occupation of this valley by the Cherokees. So far as recorded observation extends, noth-

ing like them was noted in the use or possession of the modern Indians.

There are at least plausible grounds for believing that the ancient peoples who piled up these august tumuli along the banks of the Etowah, and departing, left behind them enduring monuments of their combined labor for a wonder and enigma to later tribes, may have borrowed some of their ideas of sun-worship, idolatry, agriculture and art directly or indirectly from the southern cradle of American civilization." The great structures referred to above are located near Cartersville, Georgia, and cover an area of some fifty acres.

The three figures, front, profile and back shown here represent an idol pipe plowed up from a low flat mound in a field ten miles from Sartartia, Mississippi. It was made from a fine grained sandstone of brownish hue. It is nine inches high, four inches across the shoulders, and weighs six pounds. It represents a female devoid of dress, in a sitting posture, one leg overlapping the other with the hands clasping or resting on the knees. With a retreating forehead the face appears idiotic. The eyes seem closed. The mouth is partly open, with heavy lips, which indicate more the negro than the Indian. The hair seems to have been done up in rolls, with a knot or coil at the back. The ears are covered with a circular disk-like ornament which may have been fastened to the hair, covering the side of the head. The opening for the bowl of the pipe enters immediately below the neck, with the aperture for the stem some distance below. It is a most elaborate piece of workmanship, and one is at a loss to know what idea was dominant in the mind of its maker. Near Seltzertown, Mississippi, is situated a mound so large that one is almost forced to believe that it is of natural origin. It is a truncated pyramid nearly six hundred feet long, four hundred feet at its base, and covers nearly six acres of ground. It is forty feet high, its summit of four acres being reached by a graded way.

One marvels at the immensity of these stupendous works, which must have been erected by an agricultural and stationary people who were under some kind of paternal government similar to that of Mexico in Montezuma's time, and where many great and similar works are found.

DISC PIPES.

This interesting and very rare form of pipe is well known to archæologists. It is so-called from the discodial stem, which one at first glance would be apt to take for its bowl. They were made from red pipe-stone or Catlinite, and other stones, and appear to have been widely scattered. Six very fine specimens in the collection of Mr. A. E. Douglas, New York city, who owns three hundred and seventy-five pipes, came from Boone, Saline and Chariton, which are three of the central counties of Missouri. This appears to indicate that in that section they were first manufactured and also used. It is supposed that this was the fashionable smoking pipe of its day in certain sections, and that the disc was doubtless a mere conceit, used as an ornamental handle by the Indian dandies of the time. The bowls and stems of these smoking implements, especially so those made from Catlinite, are usually carefully drilled, and their surfaces nicely polished.

IROQUOIS PIPES.

The Rev. Mr. Beauchamp, a learned archæologist from the State of New York, tells us in one of his interesting archæological productions that: "A very large proportion of the aboriginal clay pipes of this state were made by the Iroquois. Many of them are very neatly finished, the work on them being much better than that on earthen vessels. Some are so smooth as to suggest a dull glaze. This appearance, however, comes from the careful finish of the surface. They vary much in color, as do their clay vessels. Some Seneca pipes have almost the appearance of black marble. Those

found further east are much lighter in hue. The ornamental work varies still more, and is often quite artistic. Early clay pipes had the finest features within the smokers' sight, the face on the bowl whether human, animal, bird or reptile being usually turned toward him. Later examples often reversed this feature, both in clay and stone. Quite commonly it will be found that the figure on the bowl was molded separately, and then attached."

"Symmetrical designs appear, as when two or more heads of any kind are grouped in various ways. Very often the form is both simple and elegant, as in the trumpet pipes with their graceful curves. The so-called trumpet pipes are frequent, but many others have a similar curve between the bowl and stem."

The Iroquoian type of pipe, sometimes made of stone, is common throughout an extensive territory surrounding the Great Lakes, and on both sides of the Upper St. Lawrence River. It is found on the shores of lakes Ontario and Erie, in a greater part of New York State and in northern Pennsylvania. McGuire seems to think that these nicely ornamented smoking implements are of no great age, none of them antedating French influence. The Rev. Mr. Beaushamp holds the same opinion. Mr. David Boyle, the archæologist and curator of the Archæological Museum at Toronto, Canada, in which are contained many fine specimens of ornamented Iroquois pipes, consisting of human heads and faces and animal forms, appears also to think that these pipes are not of great age, but were brought about by European influence. He believes that a careful study of them will bring about proof of the fact that this type of pipe with elaborate forms modeled upon it dated from late in the seventeenth if not the eighteenth century.

The curved clay pipes are generally of hard burnt terra cotta to which has been added a fine tempering material. At times these were curved before burning. The shapes of

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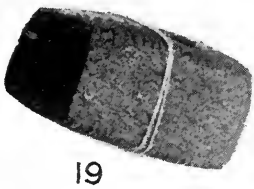
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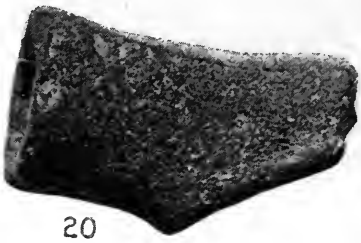
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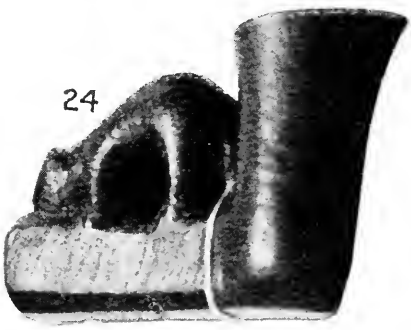
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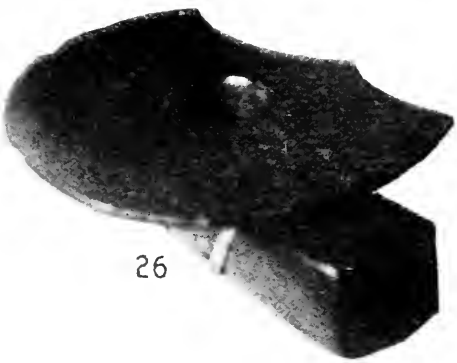
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the Iroquois pipes suggests the hunting horn, the grenadier's hat, sacred pictures, etc. In all three forms are peculiar depressions upon the surfaces of specimens suggesting the possibility of their being intended for inlaying.

There are so many European characteristics in Iroquoian pipes as to leave scarcely a doubt of their deriving their forms entirely from the French. The art concepts present both the serious and grotesque in a manner more suggestive of the French than of native American ideas.

EARTH PIPES.

In conclusion it may be interesting to note here two unique primitive pipes, which, however, were smoked a great distance apart, and by men of different races. The writer Hind, in his "The Canadian Red River," mentions this unique pipe as used on a certain occasion by a Cree Indian. "I asked what he would do for a smoke until he had finished a pipe that he was then making. He arose and walking to the edge of the swamp cut four reeds and joined some pieces together. After he had made a hole through the joints, he generally pushed one extremity in a slanting direction into the earth, which he had previously made firm by pressure with his foot. He then cut out a small hole in the clay, above the extremity of the reed, and molding it with his fingers, laughingly said, 'Now give me tobacco, and I will show you how to smoke it.' He then filled the hole with a mixture of tobacco and the bearberry, placed a live coal on the top, and stretching himself at full length on the ground, with is chin supported by both hands, he took the reed between his lips and enjoyed a long smoke."

The other still more primitive, taken from a newspaper clipping, and quoted by McGuire, tells of a pipe smoked by a Kaffir to produce stupification, as many American Indians have done and still do. The Kaffir first pours a little water on the ground and makes a sort of mud pie; he then takes

a limber twig and bends it into the shape of the bow; this he buries in the mud in such a way that both ends protrude a little at the surface. He then waits a little for the mud to harden. When he considers the pie is done to a turn, he pulls out the twig, which of course leaves a curved hole through the clay. At one end he scoops out a sort of bowl, in which he places his tobacco; at the other end he fashions a little mound to serve as a mouth-piece. He drops a live coal on the tobacco in the bowl, lies flat on the ground, applies his thick lips through the orifice and sucks away. He mixes with it a liberal quantity of dagha, a kind of hemp with intoxicating qualities similar to those of hasheesh. By the time the pipe is finished the smoker turns over in a fit."